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Title:	2011 Radioactive Waste Management Basis for Weapons Facilities Operations (WFO) High Explosive Sites, Firing Sites and Vessel Prep Building (VPB)
Author(s):	CORIZ, MICHELLE L.
Intended for:	DOE DOE Waste management Reading Room DOE

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Waste and Environmental Services Division
P.O. Box 1663, MS M996
Los Alamos, New Mexico 87545
505-667-0808/Fax 505-665-3811

Date: September 8, 2011
Refer To: WES-DO-11-015

Mr. George J. Rael, Field Element Manager
Nuclear National Security Administration
Environmental Operations
Los Alamos Site Office
3747 West Jemez Rd., MS A316
Los Alamos, New Mexico 87544

2011 Radioactive Waste Management Basis for Weapons Facilities Operations (WFO) High Explosive Sites, Firing Sites and Vessel Prep Building (VPB)

The Waste Certification Program (WCP) has reviewed the WFO-HE, Firing Sites and VPB Radioactive Waste Management Basis (RWMB) submittal for TA-8, 14, 15, 16, 36 and 39. The facility has requested RWMB approval for a two-year timeframe. WCP concurs with the waste generation and operation information provided. Operations planned during the period are routine; however, if non-routine operations are identified during the two-year period, a revision will be submitted. The referenced safety and facility documents can be obtained through the Waste Certification Program office. We are able to arrange a site visit to review facility information, if requested.

Sincerely,

Alison M. Dorries
Division Leader
Waste and Environmental Services
AMD:mlc

Enc: Radioactive Waste Management Basis WFO-HE Sites, Firing Sites, VPB 2011-07, Rev 0
Distribution:
Chris Cantwell, ADESHQ, K491
Alison Dorries, WES-DO, K491
Scotty Jones, WES-DO, K491
Steve Singledecker, WES-WGS, K491
Michelle Coriz, WES-WGS, E522
Raeanna Sharp-Geiger, WFO-DO, C925
John Tymkowych, ENV-ES, C925
George Henckel, DOE LASO
Lee Bishop, DOE LASO
Andrew Worker, DOE LASO
IRM-RMMSO, A150

Form 2107

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Radioactive Waste Management Basis Report Form

WFO 2011-July, Rev. 0

☐ Extension Requested (Detailed letter must be attached.)

Reporting Organization	Report Date	Facility Hazard:	☐ High	☐ Moderate	☒ Low
WFO - HE Sites, Firing Sites, VPB	July 25, 2011				

Purpose

The purpose of this report form is to document the radioactive activities at Technical Area(s) 8, 14, 15, 16 which are operated by the WX organization at Los Alamos National Laboratory (LANL or the Laboratory). This Radioactive Waste Management Basis (RWMB) Report Form constitutes compliance with the applicable requirements of Department of Energy (DOE) Order 435.1, *Radioactive Waste Management*, and in DOE Manual 435.1, Chapter IV, *Low-Level Waste Requirements*, and Chapter III, *Transuranic Waste Requirements*. The organization must submit an RWMB Report Form to the Waste and Environmental Services-Waste Generator Services Group (WES-WGS), Waste Certification Program (WCP) by July 30 upon expiration or when a significant waste stream change has occurred. WCP must compile the LANL Organization RWMB Reports and submit this package for DOE reporting before August 30 in order to maintain approval.

Time Requested for RWMB Approval 2 year(s) MCorn **Report Authorization**

Facility Operations Director (FOD)/Division Leader:

Name	Signature	Date
Raeanna Sharp-Geiger	[signature]	7/30/11

Report Preparer:

Name	Signature	Date
John M. Tymkowych	John M. Tymkowych	7-27-11

Waste Certification Specialist: MCorn

Name	Signature	Date
~~Kelkenny Bileen~~ MICHELLE CORN	~~[signature]~~ Michelle L Corn	~~7-27-11~~ 9/8/11

Waste Certification Program (WCP) Annual Review

Waste Certification Specialist:

Name	Signature	Date

Waste Authorization Basis

List all facility/operations authorization basis documents and include specific facility waste management documents.

☐ Nuclear-Facility ☒ Non-Nuclear Facility ☐ TSDF ☐ Accelerator ☐ An attached list is provided

Safety or Facility Document Name	Document Number	Last Rev. Date	Document Owner
☐ Waste Management Plan			
☐ Facility Waste Certification Plan (FWCP). *Do not complete pg. 3*			
☐ Operation Record			
☐ Documented Safety Analysis (DSA)			
☐ Technical Safety Requirement (TSR)			
☐ Safety Evaluation Report (SER)			
☒ Health & Safety Plan/Job Hazard Analysis	IWD's-activity specific	ongoing	various
☐ Site Treatment Plan			
☒ DOE O 435.1 Exemption for Disposal at a Non-DOE Facility	Energy Solutions-Cli	current	Ken Huff
☐ Closure Plan			
☐ Monitoring			
☐			
☐			

Institutional Document	Document Number	Institutional Document	Document Number
☒ Waste Management	P409	☒ LANL Waste Acceptance Criteria	P930-1
☒ Radioactive Waste Certification Program	P930-2	☒ Off-Site Shipment of Chemical, Hazardous, or Radioactive Waste	P930-3
☐ NMED LANL Hazardous Waste Facility Permit	NM0890010515-1	☒ LANL Packaging and Transportation Program Procedure	P151-1
☒ Environmental Management System	SD400	☒ National Environmental Policy Act (NEPA)	42 U.S.C. 4321

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Waste and Activity by Building and Destination

For any building/location managing radiological materials, enter the TA-Bldg No, (e.g., 55-0078 or 55-outside) then click on waste activity and destination box and select the appropriate descriptors for the management activity type (see key below) and waste destination. Identify total organization estimated annual volume above destination box.

TA-Bldg. No.	LLW Activity	Estimated Annual Volume 120 cubic meters / Destination	Waste Matrix	MLLW Activity	Estimated Annual Volume / Destination	Waste Matrix	TRU Activity	Estimated Annual Volume / Destination	Waste Matrix	Mixed TRU Activity	Estimated Annual Volume / Destination	Waste Matrix
14-23	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: Laboratory Trash												
15-233	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: Lift liners, B-12 and B-25 boxes and drums from firing sites												
15-534	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: Vessel Prep Facility												
15-306	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: DU contaminated firing site debris												
36-3	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: DU contaminated firing site debris (Eenie)												
36-12	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: DU contaminated firing site debris (Lower Slobovia)												
36-8	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: DU contaminated firing site debris (Minie)												
39-6	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: DU contaminated firing site debris (Point 6)												
39-57	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: DU contaminated firing site debris												
16-202	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: PPE & Lab trash												
16-332	SS	On-site Disposal	Solid	None	N/A	N/A	None	N/A	N/A	None	N/A	N/A
Comment: PPE & Lab trash												

All waste is identified for onsite disposal and will transition to offsite
M. Cozin 8/24/11

Activity: Recyc = Recycling. Stage = Staging. Store = Storage. SS = Stage & Store. Treat = Waste Treatment. SR = Stage & Repack. All = All Activities.

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RWMB Waste and Activity Continuation Sheet

Waste and Activity by Building and Destination

For any building/location managing radiological materials, enter the TA-Bldg No, (e.g., 55-0078 or 55-outside) then click on waste activity and destination box and select the appropriate descriptors for the management activity type (see key below) and waste destination. Identify total organization estimated annual volume above destination box.

TA-Bldg. No	LLW Activity	Estimated Annual Volume / Destination	Waste Matrix	MLLW Activity	Estimated Annual Volume / Destination	Waste Matrix	TRU Activity	Estimated Annual Volume / Destination	Waste Matrix	Mixed TRU Activity	Estimated Annual Volume / Destination	Waste Matrix
16-410	SS	On-site Disposal	Solid	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment: PPE & Lab trash												
16-207	SS	On-site Disposal	Solid	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment: PPE & Lab trash												
8-22	SS	On-site Disposal	Solid	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment: PPE & Lab trash												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												
	None	N/A	N/A	None	N/A	N/A	None	None	N/A	None	N/A	N/A
Comment:												

Activity: Recyc = Recycling. Stage = Staging. Store = Storage. SS = Stage & Store. Treat = Waste Treatment. SR = Stage & Repack. All = All activities

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Radioactive Waste Management Basis Report Form (Page 3)

DOE O/M 435.1 Facility/Organization Specific Summaries	WFO 2011-July, Rev. 0

Facility Scope

Provide a brief description of organization activities and operations including waste generation, management, tracking, reporting, and preliminary disposal characterization.

Response: The non-nuclear facilities, i.e firing points, within the WFO complex perform high explosive testing and research in support of weapons development. This consists of performing open detonations of of high explosives (HE) and components developed on site. Some of these firing points also perform sanitization and waste treatment operations. Wastes generated from these operations consist of shot debris and residue which may or may not contain depleted Uranium, (DU). This shot debris is containerized and managed at the firing point site in a staging or other appropriate storage area. Waste generation is tracked by facility and waste personnel who, along with the generators of the waste, will characterize the waste for final disposition.

Life-Cycle Waste Management

Describe the waste management process at the organization, security of waste funding, and the cradle to grave management. Specify how applicable procedures address waste management and controls. Utilize Environmental Management System (EMS) support.

Response:

Established waste streams are tracked by facility and waste personnel on an ongoing basis. New waste streams that are to be generated by the firing sites are reviewed by WFO waste management and environmental staff prior to project implementation to determine waste path forward. Based upon this review, funding for managemnet and disposal of the waste is built into the project cost. Project wastes are tracked by facility and waste maangement personnel from generation until final disposition at an authorized facility. Institutional procedures and controls identified on page one are followed.

Characterization

Provide a description of how the organization implements the radioactive waste characterization process at the organization and the document support. Detail the routine method of waste characterization for the organization.

Response:

Waste characterization is achieved through process knowledge and/or analyses of waste streams. This is done through institutional procedures and requirements. The routine characterization process consists of an authorized generator of waste contacting waste management personnel and reviewing the waste generation process to ensure a path forward for the waste. Process knowledge consists of any applicable MSDS's and generator notebook tracking process constituents. If there is a path forward and the review determines that sampling and analysis is required for the waste stream, a request for sampling and analysis will be submitted and a sample collected for analysis upon generation of the waste Based upon analyses and/or process knoweledge, a waste profile form is prepared and submitted for approval. Upon approval, wastes are dispositioned in a timely manner for disposal. Documents supporting the characterization, management and disposal process consist of process knowledge documentation or analytical data, approved profiles, disposal requests, transportation and disposal documents.

Packaging and Transportation

Specify organization-specific procedures for packaging operations and preparations for transportation. Laboratory personnel are required to meet the requirements of P151-1, *LANL Packaging and Transportation Program Procedure*, to ensure compliance with Department of Transportation (DOT) requirements. Identify the controls that will be implemented to prevent contents from being added to waste containers or tampered with while in a registered waste area.

Response:

WFO waste management coordinators are trained to HMPT requirements and ensure wastes are packaged in accordance with these requirements. LANL Waste Services which transports all wastes ensures that all DOT requirements are met and will not accept a waste for transport if it is not in compliance. The firing sites are located in a secure area where only authorized firing site workers have access to waste staging/storage ares.

Staging/Storage

Describe the accumulation and holding of radioactive waste that is treated, or transported to or from the organization. Describe the organization's generation process and management trail into a registered waste area.

Response:

Radioactive waste is managed in staging areas under the generators and WMC's control at the facility during generation, prior to storage in a registered area awaiting final disposition at an authorized facility. Some low level radioactive mixed wastes are treated at TA-36-8 (Minie site), which is a RCRA Permitted treatment unit. The debris generated from this treatment is

managed as low level rad waste only. WFO WMC's maintain the document trail for the registration and decommissioning of all waste storage areas in and around firing sites.
Quality Assurance Program Describe the organization-specific procedures that ensure the traceability of waste characterization records, container procurement, and the document control process.
Response: **Institutional requirements delineated on page 1 of this form ensure that waste characterization documentation is retained by LANL waste services and the waset management coordinators. Container procurement is accomplished through standard institutional procurement procedures on a project by project basis.**
Training and Qualification All waste management personnel (Waste Management Coordinators [WMCs]; Environment, Safety, Health, and Quality [ESH&Q]; Environmental Tech; etc.) are required to maintain qualification standards. Describe how the organization implements any other radioactive waste management specific training required by the organization.
Response: **There is no site specific training for radioactive waste management required beyond the institutional waste and rad worker training, however all waste management personnel are required to remain current with their training plans in order to perform work and manage radioactive waste.**
Waste Minimization and Pollution Prevention Document the implementation of waste minimization and pollution prevention programs for radioactive waste management facilities, operations, and activities. Provide assurance of waste stream evaluation before generation of waste.
Response: **Prior to generation, proposed waste streams are evaluated by WFO WMC's and Environmental staff to determine the best waset minimization and pollution prevention approaches in accordance with institutional policies, Waste Profile Form guidance and P30-2 Waste Certification Program.**

M. Cope 8/24/11